AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended). A method for the production of protein micro-arrays formed of discrete analyte-specific regions present on a solid support, wherein each discrete region contains a selected capture protein, said method comprising

a) contacting a C_5 to C_7 polyol ~~simultaneously~~ with a protein contained in a spotting solution or being present on an array, wherein said polyol is between 0.5 and 10% of the spotting solution, and wherein the polyol is a linear molecule that is linked to other molecules and is a mannitol, maltitol, or sorbitol.

b) depositing the spotting solution on one of the discrete analyte-specific regions of the surface of a nonporous solid support resulting in covalent binding of the capture proteins to the support,

~~c) allowing covalent fixation of the proteins on the surface of the support,~~

~~d)~~ allowing the spotted solution to dry on the support.

2. (Cancelled). The method of claim 1, wherein the polyol is a linear molecule.

3. (Cancelled). The method of claim 1, wherein the polyol is mannitol, maltitol, or sorbitol.

4. (Original). The method of claim 1, wherein the polyol is a D-enantiomer.

5. (Original). The method of claim 1, wherein the polyol is a L-enantiomer.

6. (Cancelled). The method of claim 2, wherein the linear polyols are linked to other molecules.

7. (Previously presented). The method of claim 1, wherein the discrete regions in the micro-array contain distinct capture proteins, and wherein steps b) and c) are repeated until the micro-array has at least 4 discrete analyte-specific regions of capture proteins per cm^2 of solid support.

8. (Original). The method of claim 1, wherein the proteins deposited on the surface are antigens, antibodies, receptors, ligands, or enzymes.

9. (Previously presented). The method of claim 1 further comprising identifying and/or quantifying proteins selected from antigens, antibodies, receptors, ligands or enzymes.

10. (Previously presented). The method of claim 1, wherein the spotting solution comprises between 1 and 5 % polyol.

11. (Original). The method of claim 1, further comprising as a final step the step of storing the micro-array between 0 and 8°C.

12. (Original). The method of claim 1, further comprising as a final step the step of storing the micro-array between 15 and 30°C.

13. (Original). The method of claims 11, wherein the micro-array is stored under air conditions.

14. (Previously presented). The method of claim 11, wherein the micro-array is stored under an atmosphere of inert gas.

15. (Original). The method of claim 11, wherein the micro-array is stored under reduced pressure or under partial vacuum.

16. (Original). The method of claim 1, wherein all said capture proteins have at least 70% of

their activity after 6 months of storage.

17. (Original). The method of claim 1, wherein all said capture proteins have at least 70% of their activity after 12 months of-storage.

18. (Previously presented). The method of claim 1, wherein the spotting solution containing the polyol molecule is an aqueous solution which also contains an anti-bacterial molecule.

19. (Original). A kit for the detection, identification, and/or quantification, of target proteins present in a biological sample or test solution, said kit comprising a protein microarray as obtained by the method of claim 1.

20. (Previously presented). The method of claim 18, wherein the aqueous solution containing the polyol molecule comprises between 0.001 and 0.5% of azide or between 1 and 100 mM of borate.

21. (New). A method for the production of protein micro-arrays formed of discrete analyte-specific regions present on a solid support, wherein each discrete region contains a selected capture protein, said method comprising

a) contacting a C_5 to C_7 polyol with a protein contained in a spotting solution, wherein said polyol is between 0.5 and 10% of the spotting solution, and wherein the polyol is a linear molecule linked to other molecules and is a mannitol, maltitol, or sorbitol.

b) depositing the spotting solution on one of the discrete analyte-specific regions of the surface of a nonporous solid support resulting in covalent binding of the capture proteins to the support,

c) allowing the spotted solution to dry on the support.